

### Firebrand characteristics and spotting predictions

#### Firebrand characteristics of jarrah bark

Rectangular samples 50 mm long, 15 mm wide and between 2 and 5 mm thick were cut from the pieces of jarrah bark collected from Plot M. These were randomised and stored in a tray prior to testing.



**Plate 1** Jarrah samples, each 50 mm long and 15 mm wide, stored in a tray prior to testing in the CSIRO Bushfire Behaviour and Management Group vertical wind tunnel.

They were then taken in order from the trays, placed on a wire frame 35 mm above the flame of a standard propane camping stove and ignited until well flaming.

Each sample was then placed in the CSIRO vertical wind tunnel and burnt untethered at its terminal velocity using techniques developed by Ellis (2000). The vertical wind tunnel allows the flight of a firebrand sample, including its time while being lofted in the convection column and while descending in the ambient wind field, to be simulated. The flaming time, burnout time and terminal velocity of 22 samples were measured.